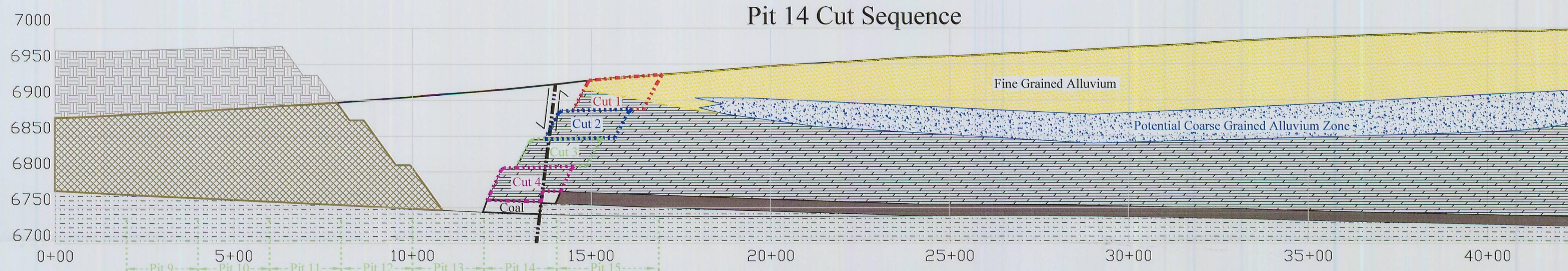


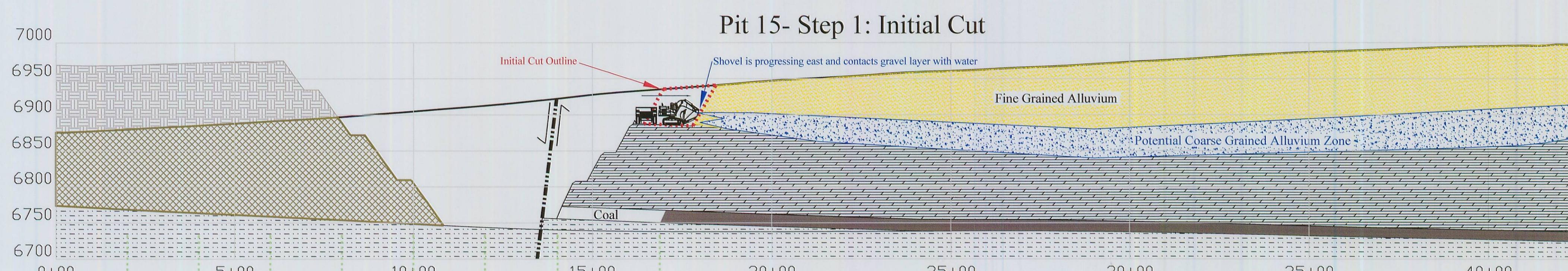
E-E'

Pit 14 Cut Sequence



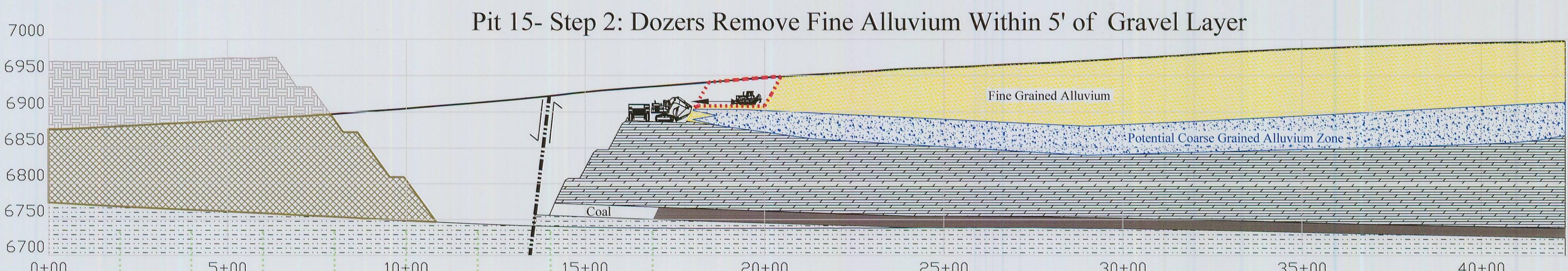
- A) As shown in this section, it is not likely to contact the coarse grain sediments in Pit 14. Based on this assessment, flows large enough to require mitigation are not expected to be encountered.
- B) The overburden is removed in benches that are approximately 40' in thickness by a truck and shovel fleet.
- C) In Pit 14, there are 4 benches that produce a stable highwall above the coal.
- D) The overburden on each bench is fully removed in most instances before moving down to the next bench elevation and is removed in the numbered sequence as shown on the cross section.
- E) The last step is mining of the coal.

Pit 15- Step 1: Initial Cut



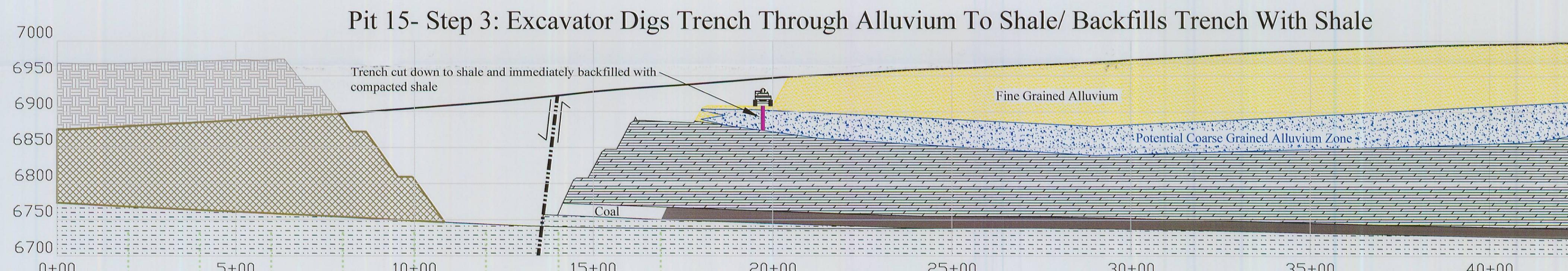
A) The shovel is working across the bench, advancing the cut face west to east and intersects a gravel layer with a flow of at least 1 cfs under pressure.
B) The shovel operator will take immediate steps by placing and compacting shale across the exposed gravels to impede the water flow from the face.

Pit 15- Step 2: Dozers Remove Fine Alluvium Within 5' of Gravel Layer



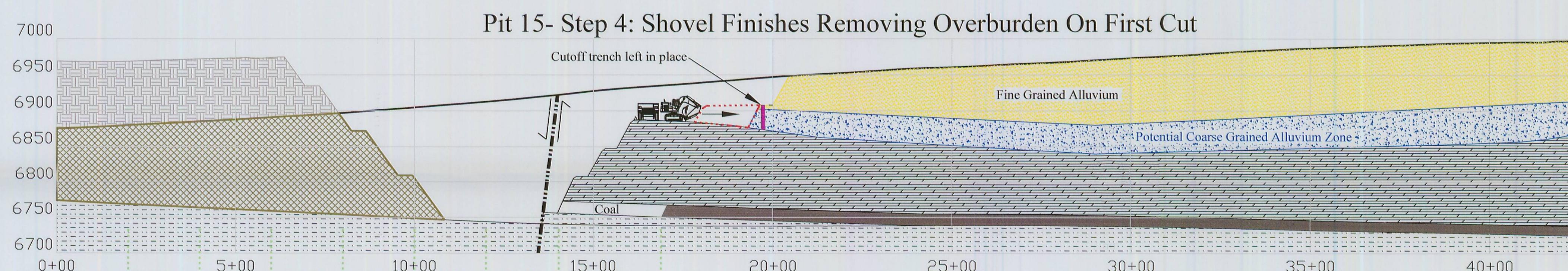
A) The shovel will stop the advance to the east.
B) Dozers that will be located on site will be used to push the fine grained alluvium to the shovel to within approximately 5 feet of the gravel layer.
C) Water that flows from the system will be routed along the bench to the south where the excavation daylights to the natural topography. Any excess water that exits the south end of the bench will flow to Pond 4.
D) Refer to Plate 2 of this Appendix for a plan view of the flow path to Pond 4.

Pit 15- Step 3: Excavator Digs Trench Through Alluvium To Shale/ Backfills Trench With Shale



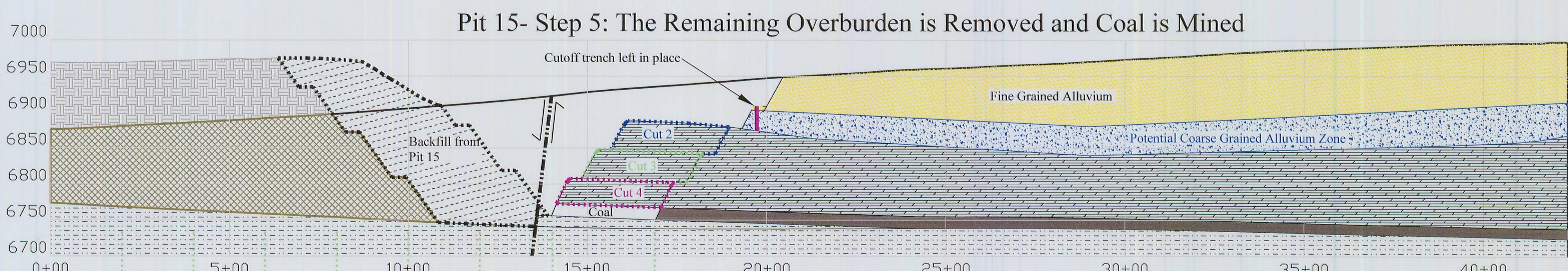
A) An excavator is positioned on the fine alluvium above the gravel layer and near the toe of the highwall.
B) The excavator cuts a trench that is approximately 10' wide down to the top of the Tropic shale layer.
C) As the excavator advances the trench, the trench is immediately backfilled with shale in layers that are compacted by the bucket.
D) This compacted shale serves as a temporary cutoff wall to minimize flows of water while the pit is mined.

Pit 15- Step 4: Shovel Finishes Removing Overburden On First Cut



A) The shovel removes the remaining alluvium back to the cutoff trench, leaving a bench and the trench in place.

Pit 15- Step 5: The Remaining Overburden is Removed and Coal is Mined



A) The remaining benches over the coal in Pit 15 are sequentially removed and the coal removed. An approximate outline of the backfill from Pit 15 is shown on the section.

B) Following this step, backfilling of Pit 15 begins with the overburden from Pit 16.

C) A permanent shale barrier is constructed during pit backfilling against the alluvium layers to impede the water system from entering the pit backfill. Details for the permanent barrier are provided in Appendix 7-10.

This drawing is a conceptual demonstration of the steps in the contingency plan. Some features such as gravel thickness and highwall slope angles may vary based on the specific conditions encountered.

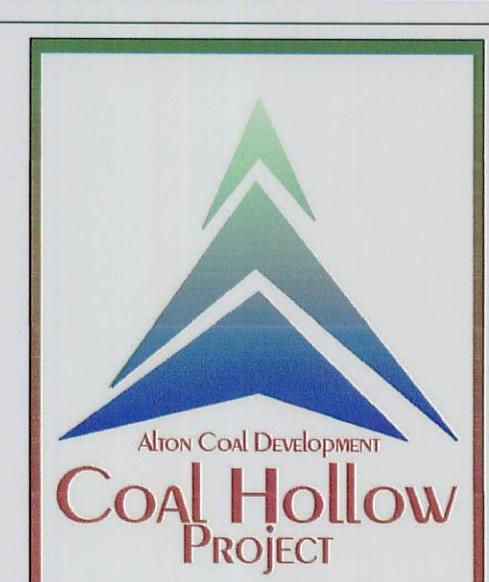
LEGEND:

- EXCESS SPOIL
- PRE-MINING SURFACE
- BACKFILL
- FINE GRAINED ALLUVIUM
- POTENTIAL COARSE GRAINED ALLUVIUM
- TROPIC SHALE
- COAL
- DAKOTA FORMATION
- SINK VALLEY FAULT

DRAWN BY:	CHECKED BY:
C. McCOURT	ECP
DRAWING:	DATE:
A7-10	8/15/09
Plate 2	SCALE:
	1" = 200'
JOB NUMBER:	SHEET
1400	

HYDROLOGY RESOURCE CONTINGENCY PLAN STEPS

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